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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ANATOLIY V. TSYRGANOVICH

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Appeal 2009-002093  
Application 10/820,237<sup>1</sup>  
Technology Center 2100

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Decided: February 5, 2010

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*Before* JAMES D. THOMAS, JAY P. LUCAS, and JAMES R. HUGHES,  
*Administrative Patent Judges.*

HUGHES, *Administrative Patent Judge.*

DECISION ON APPEAL

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<sup>1</sup> Application filed April 05, 2004. The real party in interest is ZiLOG, Inc. (App. Br. 1.)

## STATEMENT OF THE CASE

The Appellant appeals the Examiner's rejection of claims 55 and 60-74 under authority of 35 U.S.C. § 134(a). The Examiner indicates that claims 56-59 contain allowable subject matter. The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

We reverse the Examiner's rejections.

### *Appellant's Invention*

Appellant invented a horizontal correction signal circuit and method for correcting distortions – east-west geometry mismatch – in a raster display. (Spec. ¶ [0001], [0015].)<sup>2</sup>

### *Representative Claim*

Independent claim 55 further illustrates the invention. It read as follows:

55. A method, comprising:

generating a sawtooth signal, wherein the sawtooth signal has an amplitude;

generating a correction signal with no discontinuities, wherein the correction signal has a vertical retrace time  $t_{VR}$  and a vertical active time  $t_{VA}$ ;

modulating the amplitude of the sawtooth signal using the correction signal to generate a deflection signal; and

amplifying the deflection signal to generate a deflection current signal, wherein the deflection current signal is not

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<sup>2</sup> We refer to Appellant's Specification ("Spec."); Appeal Brief ("App. Br.") filed September 10, 2007; and Reply Brief ("Reply Br.") filed February 11, 2008. We also refer to the Examiner's Answer ("Ans.") mailed December 10, 2007.

distorted when the correction signal transitions from the vertical retrace time  $t_{VR}$  to the vertical active time  $t_{VA}$ .

*Prior Art References*

The Examiner relies on the following reference as evidence of unpatentability:

Jackson	US 5,475,286	Dec. 12, 1995
George	US 5,648,703	Jul. 15, 1997
PSpice A/D, <a href="http://www.orcad.com/pspicead.aspx">http://www.orcad.com/pspicead.aspx</a> (Jan. 13, 2006) (hereinafter "PSpice").		

*Rejections*

The Examiner rejects claims 55 and 61 under 35 U.S.C. § 102(b) as anticipated by Jackson.

The Examiner rejects claims 60, 62-67, 69-72, and 74 under 35 U.S.C. § 103(a) as obvious in view of Jackson and George.

The Examiner rejects claims 68 and 73 under 35 U.S.C. § 103(a) as obvious in view of Jackson, George, and PSpice.

**ISSUES**

Based on Appellant's contentions, as well as the findings and conclusions of the Examiner, the pivotal issue before us is as follows.

Does Appellant establish that the Examiner erred in finding the Jackson reference discloses generating a correction signal with no discontinuities and modulating the amplitude of a sawtooth signal using the correction signal to generate a deflection signal?

## FINDINGS OF FACT (FF)

### *Jackson Reference*

1. Jackson describes a deflection circuit (horizontal and vertical deflection circuits) which produces correction signals that generally correct asymmetrical pincushion distortion. (Col. 1, l. 54 to col. 2, l. 2.)

2. Jackson produces a parabolic horizontal correction signal (waveform) (Figure 3, element A), which is added to a sawtooth waveform, amplified, and inverted to produce the waveform depicted in Figure 3, element E (col. 5, ll. 53-54; col. 7, ll. 6-60; col. 7, l. 67 to col. 8, l. 4; Fig. 3) – “The vertical sawtooth is added to the composite signal at point D and may be considered to impart a vertical tilt to the vertical parabolic signal. This tilt results in a progressive lengthening or shortening of the horizontal display line over the duration of the vertical sawtooth.” (Col. 7, l. 67 to col. 8, l. 4).

3. Jackson produces an asymmetric correction signal (Figure 3, element F) that results from selective feedback combined with the signal shown in Figure 3, element E. (Col. 7, ll. 38-60; Fig. 3.) This asymmetric correction signal includes discontinuities at its cusps. (Col. 7, ll. 51-60; Fig. 3, element G.)

## PRINCIPLES OF LAW

### *Burden on Appeal*

The allocation of burden requires that the United States Patent and Trademark Office (USPTO) produce the factual basis for its rejection of an application under 35 U.S.C. §§ 102 and 103. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016 (CCPA

1967)). The Examiner bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Appellant has the opportunity on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

#### *Anticipation*

Anticipation is a question of fact. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). Under 35 U.S.C. § 102, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987) (citations omitted); *see also Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005) (citation omitted).

#### *Obviousness*

A claimed invention is not patentable if the subject matter of the claimed invention would have been obvious to a person having ordinary skill in the art. 35 U.S.C. § 103(a); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (hereinafter “*KSR*”); *Graham v. John Deere Co.*, 383 U.S. 1, 13 (1966) (hereinafter “*Graham*”). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject

matter and the prior art, (3) the level of skill in the art. *Graham*, 383 U.S. at 17-18. *See also KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.”)

## ANALYSIS

### *Rejection of Claims 55 and 61 under 35 U.S.C. § 102*

Appellant contends that Jackson does not disclose generating a correction signal with no discontinuities, nor does it disclose a correction signal used to modulate a sawtooth signal because the correction signal and sawtooth signal are combined. (App. Br. 7-10; Reply Br. 4-8.) The Examiner finds that Jackson discloses the claimed correction signal. (Ans. 3-4, 8-11.) Accordingly, we decide the question of whether the Jackson reference discloses generating a correction signal with no discontinuities and modulating the amplitude of a sawtooth signal using the correction signal to generate a deflection signal as recited in Appellant’s claim 55.

After reviewing the record on appeal, we find the Jackson reference describes a horizontal correction signal that generally corrects asymmetrical pincushion distortion. (FF 1-2.) The Jackson reference, however, also discloses that the correction signal is a parabolic correction signal combined with a sawtooth waveform that contains discontinuities. (FF 2-3.) Thus we find that Jackson does not disclose modulating a sawtooth signal using the correction signal. Rather, Jackson discloses combining a sawtooth signal and a correction signal. Accordingly, we find Jackson fails to disclose generating a correction signal with no discontinuities and modulating the amplitude of a sawtooth signal using the correction signal to generate a

deflection signal as recited in Appellant's claim 55. Claim 61 is dependent upon independent claim 55.

For the foregoing reasons, Appellant has persuaded us of error in the Examiner's anticipation rejection of claims 55 and 61. Accordingly, we will not sustain the Examiner's rejections of these claims.

*Rejection of Claims 60 and 62-74 under 35 U.S.C. § 103(a)*

As explained *supra*, the Jackson reference does not disclose, teach, or suggest generating a correction signal with no discontinuities. This feature is commonly recited in Appellants' independent claims 55, 62, and 72.

Claims 60 and 69-71 depend on independent claim 55, claims 63-68 depend on independent claim 62, and claims 73 and 74 depend on independent claim 72. By virtue of their dependency on their respective base claims, each of claims 60, 63-71, 73, and 74 includes the feature of generating a correction signal with no discontinuities. After reviewing the record on appeal, we find that this feature is not collectively taught by the combination of the Jackson reference with the George or PSpice references.

For the foregoing reasons, Appellant has persuaded us of error in the Examiner's obviousness rejection of claims 60 and 62-74. (App. Br. 11-16.) Accordingly, we will not sustain the Examiner's rejections of these claims.

## CONCLUSION OF LAW

On the record before us, we find that Appellant has established that the Examiner erred in finding the Jackson reference discloses generating a correction signal with no discontinuities and modulating the amplitude of a sawtooth signal using the correction signal to generate a deflection signal.

DECISION

We reverse the Examiner's rejections of claims 55 and 61 under 35 U.S.C. § 102(b).

We reverse the Examiner's rejections of claims 60 and 62-74 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(iv).

REVERSED

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